PLANNING COMMISSION

MINUTES
September 29, 2010
4:00 P.M.
CITY OF FREDERICKSBURG
715 PRINCESS ANNE STREET
COUNCIL CHAMBERS

COMMISSION MEMBERS	CITY STAFF
Roy McAfee, Chair	Ray Ocel, Director of Planning
Dr. Roy Gratz, Vice-Chair	Erik Nelson, Sr. Planner
Susan Spears, Secretary	
Ricardo Rigual, Absent	
Edward Whelan, III	
Vic Ramoneda	
Berkley Mitchell, Absent	

1. CALL TO ORDER

The September 29, 2010 Planning Commission meeting was called to order at 4:00 p.m. by Chairman Roy McAfee.

2. PLEDGE OF ALLEGIANCE

3. ADOPTION OF MINUTES

- September 8, 2010 Minutes were approved and adopted as submitted.

PRESENTATION

4. Preferred location of a new interchange on I-95 – presented by Lloyd Robinson and Andy Waple of GWRC.

Mr. Robinson provided a power point presentation of the Draft I-95 Access Study (New Access to I-95 between Route 3 and the Rappahannock River) – ATTACHMENT A.

Mr. Whelan noted that the ratings appeared quite low and asked if this is due to economic reasons.

Mr. Lloyd said this was correct.

Dr. Gratz noted that, according to the provided map, the interchange appears to go directly through the proposed slavery museum property.

Mr. Lloyd said this is correct and that a portion would pass through where the parking area of the proposed museum.

Dr. Gratz also noted that the proposed toll road would be going through the eco-tourism zone at Celebrate Virginia and did not believe they would be compatible.

Dr. Gratz also mentioned the parking lot at Richard's Ferry Road, and supported the FOR call for keeping the camping area at the confluence less accessible to land traffic.

Mr. McAfee thanked the staff of GWRC for their work and said it is encouraging to see pedestrian access wherever possible.

UNFINISHED BUSINESS/ACTION ITEMS

4. **SUP2010-06: Calvary Christian Center** - Special Use Permit request in order to operate a private school for children with a qualifying disability (not physical) in the Calvary Christian Center located at 2222 Jefferson Davis Highway. The applicant, Fair Wind, proposes to operate a special day school for up to 12 children. The property is zoned CT, Commercial Transitional and is designated Transitional/Office on the Future Land Use Map found within the 2007 Comprehensive Plan.

Mr. Ocel noted that at the September 8th public hearing, the Commission did not receive any public comments in regard to the application. Mr. Rigual raised a question about any interaction that may occur between children in the day care on the first floor and the students in the proposed school. The applicant noted that due to different arrival and departure times and being located in different parts of the building, there would be little to no interaction between the two groups.

This is a request to approve a special use permit to operate a special day school within the Calvary Christian Center located at 2222 Jefferson Davis Highway. The applicant proposes to locate the school in two offices and two classrooms (rooms 202 and 203) located on the second floor of the Center. (See attached floor plan) The property is zoned C-T, Commercial Transitional and is owned by Calvary Christian Center. A site plan of the property is shown on the opposite side of the aforementioned floor plan. The property is located on Jefferson Davis Highway and contains the existing church building and its associated parking lot. The property is currently being used for services in the sanctuary, related church functions and a day care operated by the Center.

Dr. Gratz made a motion to recommend approval with the conditions outlined in the staff report.

Mr. Ramoneda seconded the motion.

Motion carried unanimously by a vote of 5 – 0.

5. **The Fredericksburg Watershed Management Property Plan** has been prepared as a guide to decision making in regard to the 4,232 acres of land that the City placed in a conservation easement in 2006. The property's conservation easement provides a high level of protection from development, vegetation removal, and other major alterations. Further issues that needed to be addressed are addressed in the Plan and include access management, trails management, and new recreational use. Consequently, a management plan outlining guidance and policies to balance management of the exceptional natural resources of the property with continued public recreation use was developed. The public hearing will be another opportunity to comment on the draft Plan.

Mr. Nelson said that at the Planning Commission's public hearing, on September 8, 2010, approximately 35 people were in attendance. Nine of them provided public testimony.

One speaker noted that gold prospectors, regulated by state and federal agencies, are allowed to pursue their activity in public waterways, but asked that their access to the rivers not be curtailed. Several hunters spoke in opposition to safety zones around campsites, while a spokesman for Friends of the Rappahannock (FOR) asked that all campsites have safety zones.

Seven speakers, both hunters and trappers, asked that the City's 1991 prohibition of trapping on City lands be rescinded. Trapping is recognized as a management tool and regulated by the Virginia Department of Game and Inland Fisheries (VDGIF).

Access to the river has always been a point of any discussion of the City's upriver lands. There were no speakers opposed to the proposed public access at Hunting Run (Spotsylvania) and Rocky Pen Run (Stafford). Each site would require the permission of the political jurisdiction, ensuring local support for such a facility, if developed. New access at these two sites would also not compromise the recreational experiences identified in the Plan. One speaker mentioned the potential for an access point at Deep Run, but this site is problematic and was not included in the draft Plan. Proposed parking on City land at the end of Richard's Ferry Road (Culpeper), however, was strongly opposed by FOR. This organization claimed that adverse impacts to the Confluence camping areas would result from any improvements.

Following public testimony, the Planning Commission asked for a clearer plan of action and more cohesive administrative procedures.

In this latest draft, the following pages have been amended:

- Page 3 – improved map
- Pages 43-44 – clarification of new access points
- Page 47 – basic administration
- Pages 49-51 clarification of recommended action items (staff also ensured each item was first referenced in the main body of the document
- App 2 – the summary of Public Comments was updated to reflect the Planning Commission hearing.

There appeared to be consensus on the content of the draft Plan, with the exception of the following two items:

1. FOR desires numerous safety zones.
2. FOR opposes a parking area at the end of Richard's Ferry Road.

The FOR had shared these concerns previously with the Plan Development Committee, which gave them considerable attention and consideration. The Committee has taken the following position:

Safety zones were evaluated within the context of user conflicts, both real and perceived. Canoeing and camping occur in the spring and summer, while hunting season begins in the fall. In public testimony during Plan development, numerous hunters noted there was no real conflict being addressed, but rather a perceived conflict. The Plan Development Committee discussed this matter at length and found that there was no evidence of actual hunter/camper conflict. To reassure late season campers, without unnecessary interference with other activities, the Committee came up with a compromise and recommended that a safety zone be established at the Confluence, which is an easily identified area.

The Richard's Ferry Road parking area was also reviewed by the Plan Development Committee. Although FOR suggests that new infrastructure will cause problems at the Confluence, Richard's Ferry Road already exists. The proposed parking area is meant to address existing problems, rather than create new ones. Constructing a parking area just inside the City property at the end of this road is planned as a way to provide enforcement authority to the City's Watershed

Property Manager and VDGIF. At present, only the Culpeper Sheriff has jurisdiction because Richard's Ferry Road is a county roadway. In addition, VDGIF will repair the primitive road to the Confluence. These repairs will facilitate enforcement activity by City and State forces (the primitive road is secured from unauthorized entry) as well as arrest erosion problems that are currently adding to the sediment load into the rivers.

Mr. Nelson said he believes the Plan Committee has developed responsible policies, through attention to public comments, careful consideration of City needs, and reasonable compromises.

Mr. McAfee said he would like the date on the cover of the draft report be changed to reflect that changes had been made and the document has been updated to its current draft form.

Mr. McAfee asked Mr. Nelson if he was aware of or had any knowledge of past hunting accidents in the subject areas.

Mr. Nelson said there had been no accidents, to his knowledge.

Ms. Spears asked what the real reason is to restrict hunting at the confluence.

Mr. Nelson said that the FOR had requested safety zones in all camping areas but that having a safety zone at the confluence, which is mentioned in the recent draft Plan, "is" the compromise.

Ms. Spears said she did not believe the city should agree to a compromise because the end result is that other agencies could request a compromise and then the city could find itself chipping away entire hunting areas.

Dr. Gratz said he agrees with FOR and believes there needs to be more safety zones as guns and campers don't mix and people should not have to be dodging bullets.

Ms. Spears said she would not vote for the Plan if there are any restrictions on hunting.

Mr. McAfee asked if Commissioners would prefer to postpone a vote on this item until such a time that they have had more time to read the entire document and absorb its content.

Commissioners agreed that they would like additional time to read the document and discuss it further.

Dr. Gratz made a motion to table a decision on moving the draft Plan forward until the October 13, 2010 Planning Commission meeting.

Mr. Ramoneda seconded the motion.

Motion carried unanimously by a vote of 5 – 0.

OTHER BUSINESS

Planning Commissioner Comment

- Mr. McAfee noted that the Election of Officers would be held at the October 13, 2010 Commission meeting.
- Mr. McAfee encouraged Commissioners to look over the timeline document given to them on September 8th by Mr. Ocel and commenting or adding items they deem appropriate.

Planning Director Comment

- Mr. Ocel confirmed that the Watershed Plan would be voted on at the October 13, 2010 meeting.

- Mr. Ocel provided a brief description of upcoming agenda items for the October 13, 2010 meeting.

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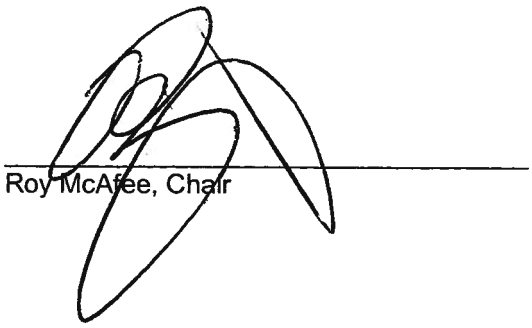
ADJOURNMENT

Meeting adjourned at 5:08 p.m.



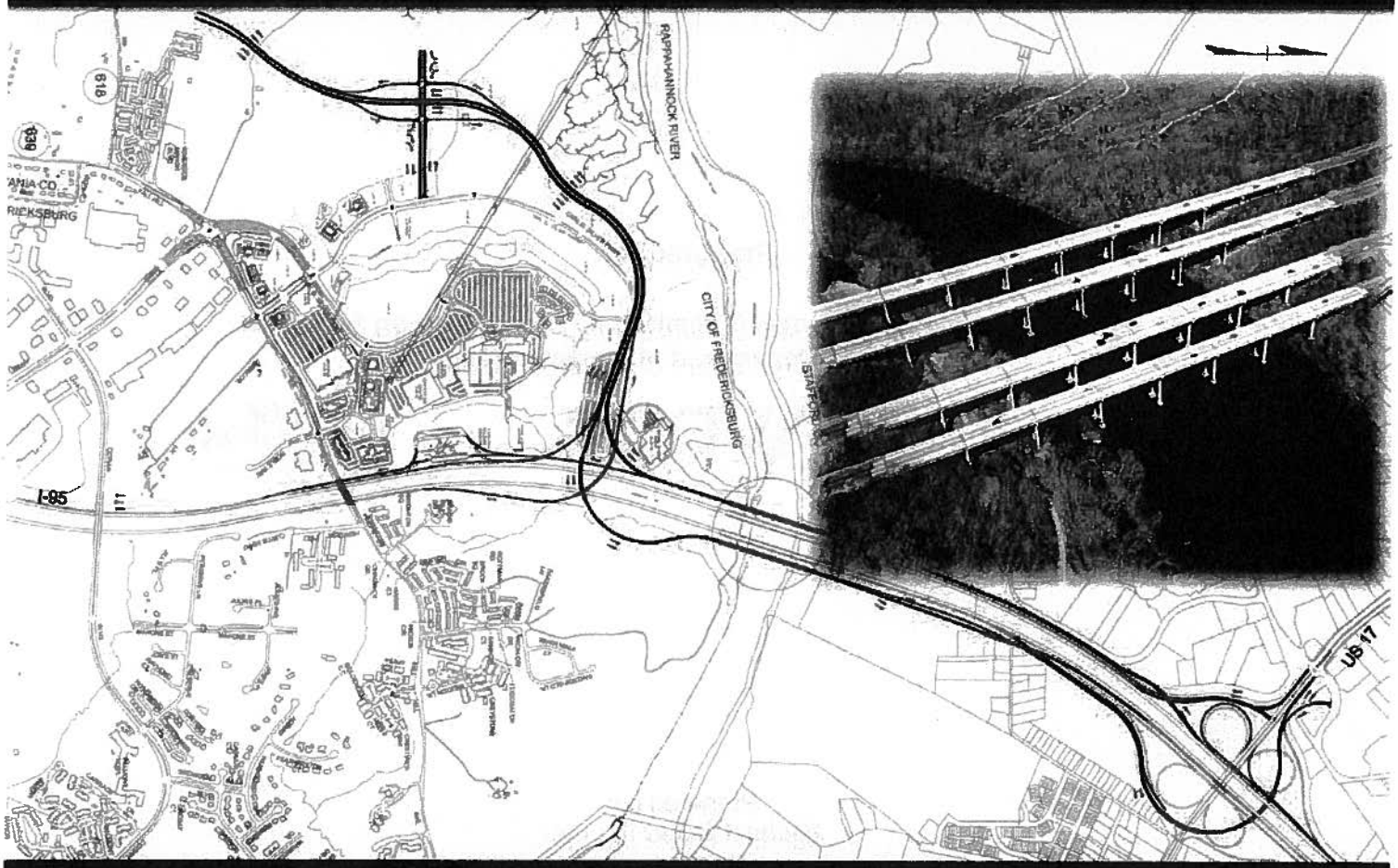
Roy McAfee, Chair

Attachment H

DRAFT

I-95 Access Study

New Access to I-95 between Route 3 and the Rappahannock River



VDOT

GEORGE WASHINGTON REGIONAL COMMISSION

FAMPO
Fredericksburg Area Metropolitan Planning Organization

Prepared by:

Baker
Michael Baker Jr., Inc.

September 10, 2010

I-95 ACCESS STUDY

New Access to I-95 between Route 3 and the Rappahannock River

Prepared for:

George Washington Regional Commission / Fredericksburg Area MPO
Virginia Department of Transportation

FAMPO
Fredericksburg Area Metropolitan Planning Organization

VDOT
Virginia Department of Transportation

GEORGE WASHINGTON
REGIONAL COMMISSION

Prepared by:
Michael Baker Jr., Inc.

Baker

In association with:
Vanasse Hangen Brustlin, Inc
T3 Design, PC
Peggy Malone & Associates

September 10, 2010

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EXECUTIVE SUMMARY

PROJECT BACKGROUND AND NEED

Since 1980, the George Washington Region (comprised of the City of Fredericksburg and the Counties of Spotsylvania, Stafford, Caroline, and King George) is the fastest growing area in Virginia on a percent population basis. An existing population of approximately 325,000 is projected to almost double to nearly 600,000 by 2035. With this explosive growth the region has emerged to be a significant urban area of economic and social activity. It is also an area which has high commuting exchange with the greater Washington, D.C. business and military community. This growth has led to increased traffic volumes and congestion on the existing roadway network.

Currently I-95 carries over 150,000 vehicles per day and experiences congestion during peak periods, with portions of the interstate operating at level of service (LOS) F. Route 3 carries up to 83,000 vehicles per day, exceeding the capacity of a six-lane arterial street and resulting in LOS F during the peak periods at its signalized intersections. Traffic volumes on I-95 are projected to increase to 244,000 vehicles per day by 2035, while Route 3 volumes are expected to increase to over 116,000 vehicles per day. The ability of these facilities to carry volumes at these levels is a serious concern, even with the proposed construction of the two reversible I-95 High Occupancy Toll (HOT) lanes. Therefore, congestion and operating levels of service will continue to deteriorate on I-95, Route 3 and its interchange.

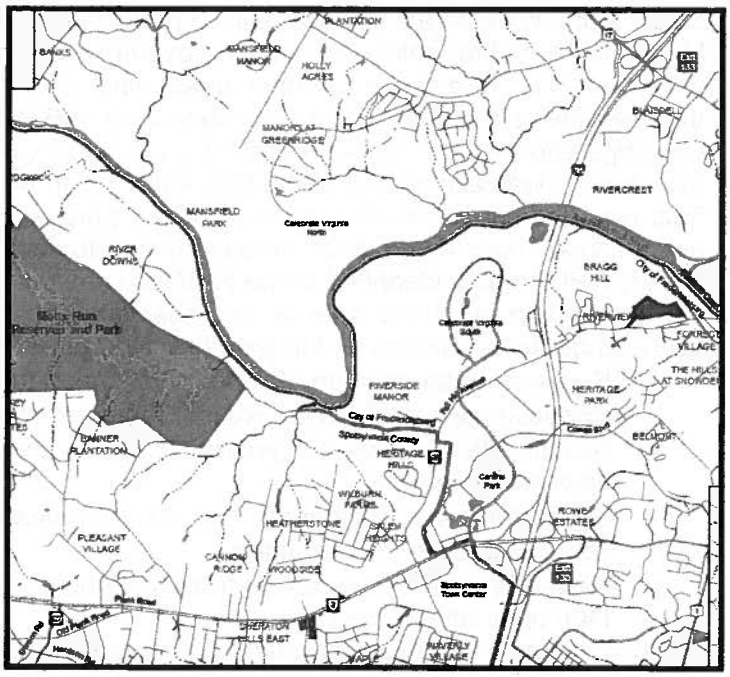

Figure ES-1: Study Area

In the past, traditional highway engineering approaches and funding to this problem have led to the definition of a discrete set of improvements to I-95 to address localized bottlenecks in the George Washington Region. For two decades these discrete solutions have witnessed little funding and less progress towards implementation. In the same time, the population and growth has intensified, and the transportation gridlock has increased. The Fredericksburg Area Metropolitan Planning Organization (FAMPO) and the Virginia Department of Transportation (VDOT) are evaluating the possibility of constructing a new access point or interchange with I-95 in the City of Fredericksburg between the Rappahannock River and Route 3 (See Figure

ES-1). A new toll limited access facility would intersect with I-95 near the existing rest area and proceed west and tie into Route 3 near Gordon Road.

As a result of the well-documented concerns in the study area, and a detailed investigation of the traffic operations in the existing conditions (Chapter 2) as well as 2035 No-Build condition (Chapter 3), a Purpose and Need Statement (Chapter 4) was prepared for this effort. In summary, the purpose of the project is to reduce congestion on Route 3 between Gordon Road and I-95 including the I-95/Route 3 interchange, facilitate movement between I-95 and the key commercial areas in Fredericksburg, and facilitate weekday peak period commuter flows between I-95 and the residential communities in Spotsylvania County. This I-95 Access Study was initiated to identify alternatives that address this Purpose and Need.

ALTERNATIVES ANALYSIS

This I-95 Access Study included an alternatives analysis (See Chapter 5) to determine what alternatives would best meet the Purpose and Need while minimizing impacts and costs. The study team considered the feasibility and effectiveness of potential Transportation System Management (TSM) solutions, and improvements to the existing I-95 interchanges at Route 3 and Route 17. In addition to these ideas, nine different alternatives were developed. Each of the alternatives includes a connector road from I-95 to Route 3 and a new interchange on I-95. Drawings showing the various Build Alternatives are included in Appendix C. For purposes of this study, it was assumed that the Connector Road would operate in a free condition (no tolls). This was deemed to be the "worst case" for purposes of designing enough capacity for build alternatives. These alternatives were compared to each other and the no-build alternative which includes all projects identified in the FAMPO Constrained Long Range Plan (See Section 3.2). The evaluation of these alternatives (Section 5.5) resulted in Alternative N5, with a full interchange, being chosen as the preferred alternative for the following reasons:

- Reduced congestion on I-95 over the Rappahannock River more than other alternatives
- Reduced congestion at the Route 17 Interchange more than other alternatives
- Significantly reduces congestion at the Route 3 Interchange by diverting traffic to the new connector road
- Separates much of the traffic that currently weaves between Route 3 and Route 17
- One of the cheaper alternatives
- Generally had fewer impacts to existing businesses and potential residential relocations than other alternatives

As shown above, the preferred alternative provides benefits exceeding the goals set forth in the Purpose and Need.

The preferred alternative includes the following components shown in Figures ES-2 and ES-3:

- A new full interchange with I-95 (providing access to the west only) between the rest area and the Rappahannock River
- New two-lane structures over the Rappahannock River parallel to the existing structures (one in each direction)
- Interchange improvements at Route 17. At this time, neither the underpass nor the overpass option for the NB to WB off-ramp is being identified as the preferred option. More detailed analysis during the NEPA phase should identify the preferred design.

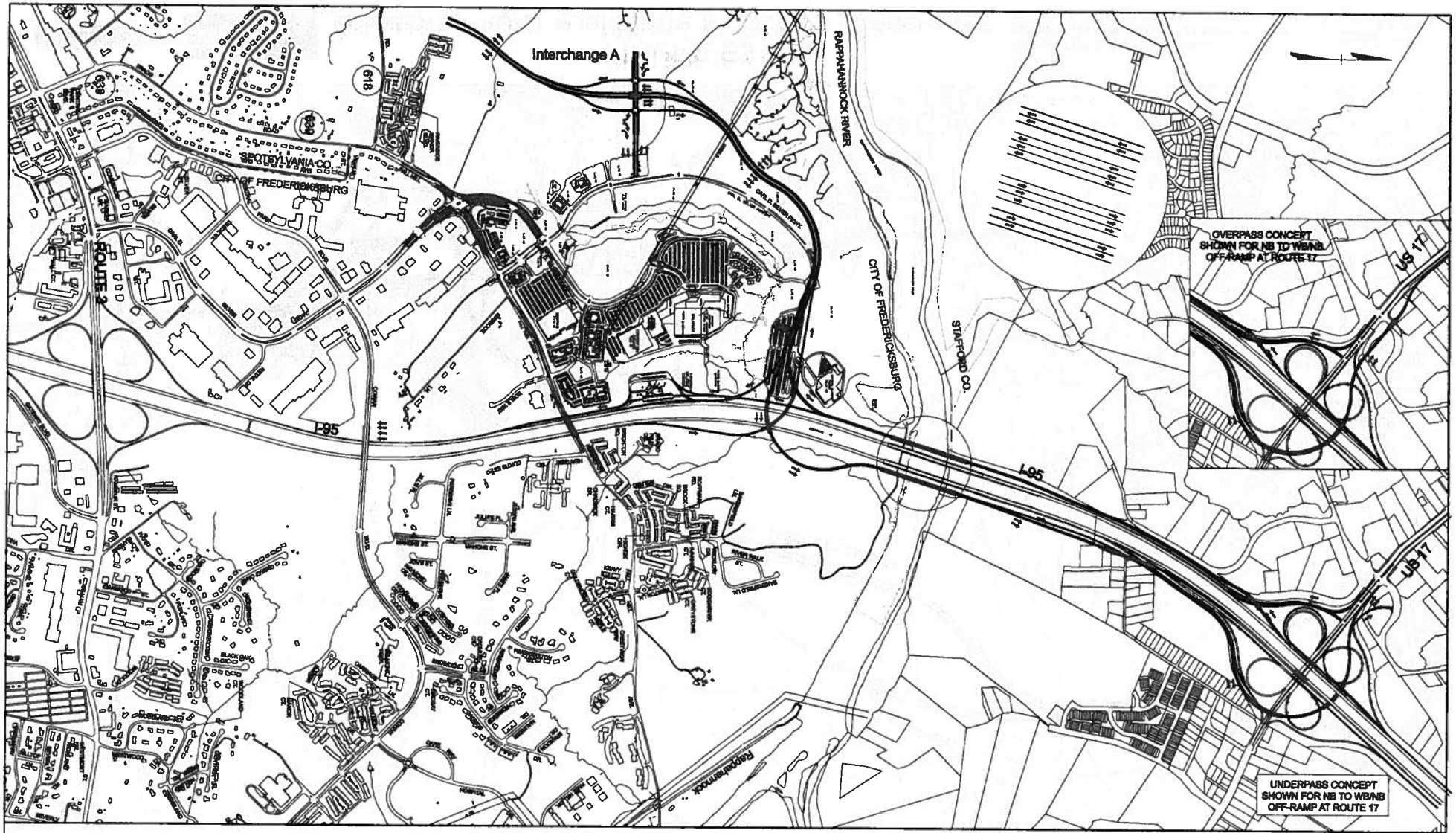

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FIGURE ES-2
ALTERNATIVE N5 FULL INTERCHANGE

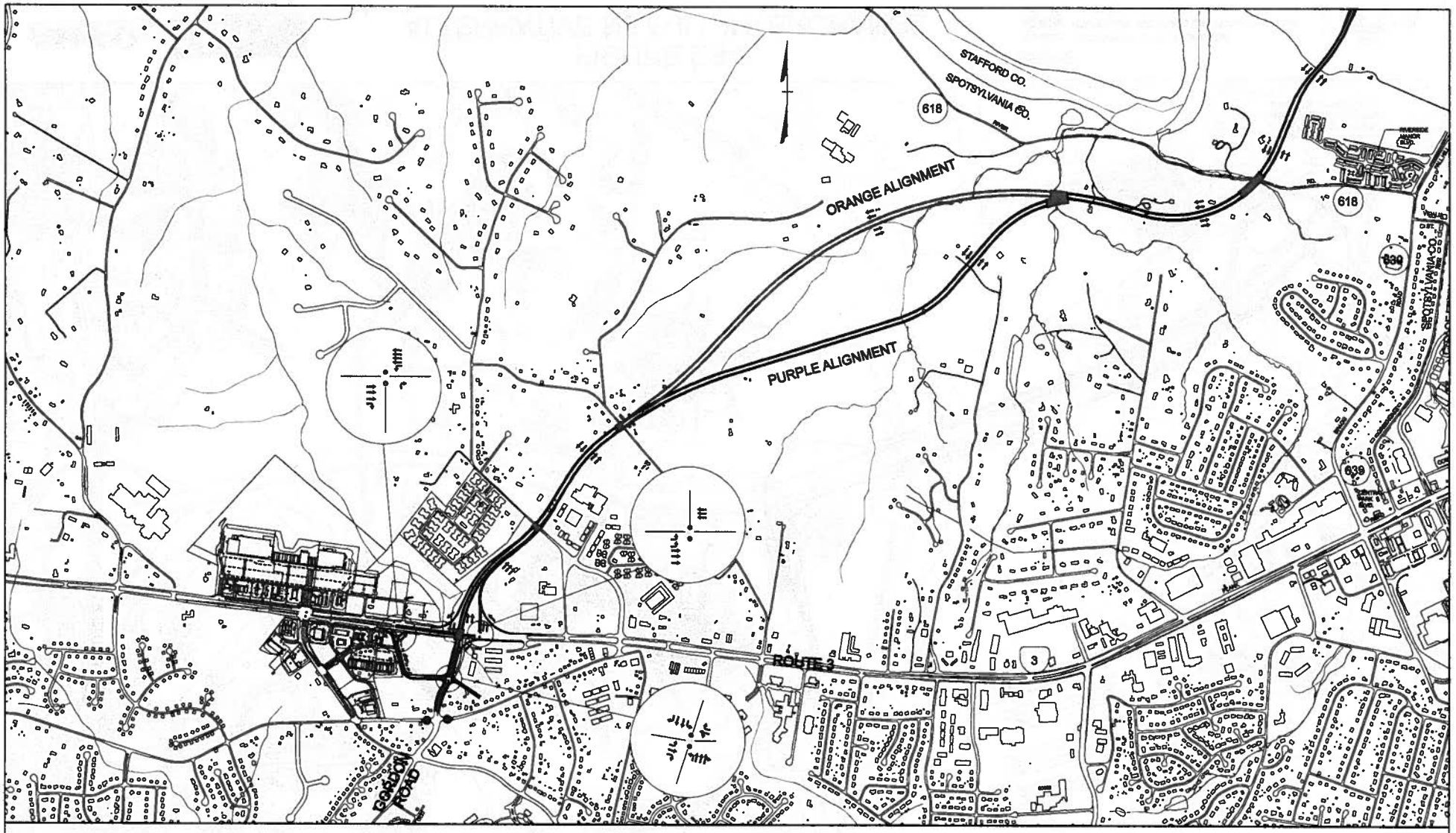

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FIGURE ES-3

CONNECTOR ROAD ALIGNMENTS & ROUTE 3 INTERCHANGE

LEGEND

- IMPROVEMENTS TO I-95 MAINLINE
- NEW RAMPS, C-D ROADS OR CONNECTOR ROAD
- PROPOSED STRUCTURES

SCALE

0 400' 800' 1200'

- A four to six lane limited access connector road from I-95 to the Route 3/Gordon Road intersection.
- An interchange at the Route 3/Gordon Road termini of the connector road
- An interchange (Interchange A) providing access to commercial areas from the connector road.

RESPONSES TO FHWA 8-POINT POLICY ON INTERSTATE HIGHWAY ACCESS MODIFICATIONS

FHWA's Policy on Access to the Interstate System provides the requirements necessary to justify or substantiate any proposed changes in access to the Interstate System. FHWA's policy statement is printed below. Following the policy statement are the eight specific policy requirements along with a response for each concerning the proposed new I-95 Interchange associated with the preferred alternative:

> *It is in the national interest to preserve and enhance the Interstate System to meet the needs of the 21st Century by assuring that it provides the highest level of service in terms of safety and mobility. Full control of access along the Interstate mainline and ramps, along with control of access on the crossroad at interchanges, is critical to providing such service. Therefore, FHWA's decision to approve new or revised access points to the Interstate System must be supported by substantiated information justifying and documenting that decision. The FHWA's decision to approve a request is dependent on the proposal satisfying and documenting the following requirements.*[1]

1. The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a)).

The study team considered the feasibility and effectiveness of improvements to the existing I-95 interchanges at Route 3 and Route 17 as well as local street improvements. Potential local street improvements could include additional crossings of I-95 and improvements to Route 3. Additional crossings of I-95 other than Fall Hill Avenue and Cowan Boulevard could improve east-west travel but would not improve access to and from I-95 for shoppers and commuters and thus not meet the study's Purpose and Need.

Improvements to Route 3 to accommodate projected travel demand would be extensive and essentially result in converting Route 3 into a limited access type facility converting at-grade intersections into grade separated interchanges. Required improvements to Route 3 were explored as part of the *VDOT I-95 Interchange Access Justification Study* completed in March 2000. These improvements would be expensive (over $100 million), require the taking of commercial properties on both sides of Route 3 from I-95 to past Bragg Road, and would also require rebuilding the Route 3 Interchange with I-95. The braided ramps, flyovers and other elevated structures do not fit into the surrounding environment of a major suburban shopping

1. Federal Register: August 27, 2009 (Volume 74, Number 165) page 43743.

district. In addition, improvements only to Route 3 would reduce congestion on Route 3 but would increase volumes merging onto the I-95 mainline worsening congestion and operations problems. Under the no-build conditions, the expected >225,000 vehicles per day demand for I-95 well exceeds the approximate 150,000 vehicles per day capacity of the existing six general purpose lanes. Additional discussion of the local street improvements alternative is provided in Section 5.3.

Improvements only to the Route 3 interchange can also improve traffic operations at the interchange but will not solve all of the operational problems at the interchange. Several options to improve the interchange were considered. The first option is to maintain the existing cloverleaf configuration but develop collector-distributor (C-D) roads through the interchange that connect with the ramps. The C-D roads will eliminate access points along the mainline and remove two weave sections from the mainline. The negatives associated with this configuration include:

- The southbound C-D Road diverge from I-95 mainline cannot handle the projected volumes and is expected to operate at LOS F. Likewise the northbound C-D Road merge with I-95 mainline also will operate at LOS F.
- The eastbound to northbound on-ramp and southbound to westbound off-ramp need to be two-lane directional ramps.
- The southbound weave distance between the rest area on-ramp and the Route 3 Interchange will be significantly reduced potentially causing operational problems.

A second option is to provide two-lane directional ramps for the eastbound to northbound on-ramp and southbound to westbound off-ramp. This option still has operational problems (LOS F) with the ramp merge and diverges from the I-95 mainline.

Improvements only to the Route 17 interchange can improve traffic operations at the interchange but they will not have any effect on solving the operational problems at Route 3. In addition, the improvements would increase volume merging onto the I-95 mainline worsening mainline congestion and operations problems. Improvements to the Route 17 interchange were considered during development of the build alternatives and are included as part of the preferred alternative.

Analysis shows that isolated improvements to the existing interchanges will provide improved traffic operations at the interchanges but will not solve all the operational problems and will not provide any congestion relief for the Route 3 or I-95 mainline sections. A new interchange between Route 3 and Route 17 would divert approximately 30 percent of the projected 2035 traffic from the existing Route 3 interchange, improving operations at that interchange and along Route 3 itself. Additional capacity improvements along I-95 were considered during development of the build alternatives and are included as part of the preferred alternative. Additional discussion on the existing interchange improvements alternative is provided in Section 5.4.

2. The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit, and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access (23 CFR 625.2(a)).

The study team considered possible TSM improvements consisting of additional HOV facilities, expanded transit services, improved signal timing and synchronization and intelligent transportation system improvements over those included as part of the No-Build Alternative. Additional details of the TSM Alternative are contained in Section 5.2.

Potential TSM measures included additional HOV lanes, park and ride lots, carpools and vanpools. The *FAMPO 2035 (Constrained) Long-Range Transportation Plan* (CLRP), and thus the No-build alternative, includes two reversible HOT lanes that are available to HOV+3. It is unlikely that additional HOV facilities beyond those planned would improve operations based on the results from the *I-95 HOV Feasibility Study* that concluded that additional time savings (projected at 7 minutes of savings) is not pivotal when the commuter can already save 40 minutes by using the existing HOV lanes. This additional 7 minutes of savings would not be enough to induce a significant shift of traffic to HOV mode.

Another TSM measure considered was Intelligent Transportation System (ITS) improvements such as changeable message signs and cameras. The biggest benefit of these types of improvements is to warn traffic of congestion and offer alternative routes and help authorities manage and respond to incidents. There are very few alternatives to I-95 across the Rappahannock River, so although ITS can have an effect helping relieve non-recurring congestion, it is more limited in solving reoccurring congestion along facilities well over capacity. Under the no-build conditions, the expected >225,000 vehicles per day demand for I-95 well exceeds the approximate 150,000 vehicles per day capacity of the existing six general purpose lanes.

Signal timing coordination and improvements also would have limited ability to improve operations. Currently the signals on Route 3 and Route 17 are coordinated by VDOT to get the most capacity possible of both facilities. VDOT periodically retimes the signals to respond to changes in travel demand. As demands in these corridors grow, signal timing changes would provide diminishing return in terms of traffic operations. Any improvement on the arterials would have little impact on the I-95 mainline.

Additional transit improvements beyond those in the 2035 CLRP were also considered. However as noted in the *FAMPO 2035 CLRP*, public transit performance cannot be improved by simply increasing transit service frequencies and areas of coverage, because the land use densities are too low to support this type of increase economically. Also the type of transit proposed for the FAMPO area would run in mixed traffic and thus would be a victim of background congestion.

The TSM measures discussed above are limited in the ability to improve traffic operations in the region and would not eliminate the need for the capacity improvements identified in the Purpose and Need.

3. An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed changes to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

A safety and operational analysis was conducted for the preferred alternative and is summarized below and presented in detail in Sections 6.4 and 6.5 and in Appendix D – Preferred Alternative. This analysis included one interchange immediately north (Route 17) and south (Route 3) of the proposed new interchange. The next adjacent interchanges are an additional 3-4 miles away in both directions. On both Route 3 and Route 17 at least one major intersection on each side of the interchange was included in the operational and safety analysis. Results for the mainline and ramp analyses are discussed below and shown in Figure 6-8.

Northbound I-95

There is significant improvement in level of service for northbound I-95 mainline segments and ramp junctions when compared to the No-Build Conditions. Most of the segments were operating at LOS F in the AM and PM peak hours under 2035 No-Build conditions and these segments have improved to LOS C and D in the AM peak and LOS D in the PM peak. However, north of Route 17 the LOS drops from LOS E to LOS F due to the projected higher traffic volumes during the AM peak hour when compared to the No-Build condition. (Since I-95 is congested north of Route 17, it is unlikely that much traffic will actually divert to I-95 from Route 1.) During the PM peak hour, I-95 is still expected to operate at LOS E between the new interchange and Route 3; however, the density on I-95 is expected to decrease 40% compared to the No-Build condition. The new C-D road across the Rappahannock River is expected to operate at LOS D and B for the AM and PM peak hours respectively.

Southbound I-95

In the southbound direction, similar improvements in LOS are expected. During the AM peak hour, movements that are predominately LOS D in the No-Build Condition become LOS A, B, or C for mainline segments and ramp junctions in the Build Condition. During the PM peak hour, movements that are mostly LOS F in the No-Build Condition become LOS D for mainline segments and ramp junctions in the Build Condition. North of Route 17, the LOS remains LOS F due to the projected higher traffic volumes during the PM peak hour when compared to the No-Build condition. (Since I-95 is congested north of Route 17, it is unlikely that much traffic will

actually divert to I-95 from Route 1.) The new C-D road across the Rappahannock River is expected to operate at LOS B and E for the AM and PM peak hours respectively. The SB to WB off-ramp at Route 3 is expected to remain at LOS F during the PM peak hour, however, the density is expected to decrease to about half that expected for the No-Build Condition.

Although all the expected operational problems are not solved on I-95, significant improvements in operating conditions are expected with the construction of the Preferred Alternative. Additional mainline lanes on I-95 beyond those proposed for the C-D Roads will be required to bring deficient segments up to an acceptable LOS. Any additional lanes will need to be continuous and extend many miles north of the existing project area. The proposed preferred alternative will not prevent these further improvements from being implemented in the future.

Route 3 and Route 17
Generally, the intersection level of service under the Build Condition is expected to significantly improve along Route 3 because traffic volumes on Route 3 are expected to drop by approximately 30 percent when compared to the No-Build Condition (See Table 6-6). However, there are still expected to be some traffic operational problems at the intersections. Traffic operations at the Route 17 intersections are not expected to change much at all between the Build and No-Build Conditions.

Even if there is not as great a diversion in traffic from Route 3 to the new connector road, the preferred alternative will still improve traffic operations on the I-95 mainline and at the two interchanges when compared to the no-build condition.

The CORSIM analysis generally confirms the results from the HCS analysis. There are significant improvements to the operations at Route 3, Route 17, and I-95 when compared to the No-Build Condition. During the PM peak hour, there are still two bottlenecks entering our study area: 1) southbound I-95 (north of Route 17) and 2) EB/SB Route 17 (west of the I-95 interchange). These bottlenecks restrict the amount of traffic that is able to enter the network and thus lower volumes than the design volumes are processed through the CORSIM model resulting is lower densities than those calculated using the HCS software.

Safety Analysis
Section 6.5 documents the qualitative analysis of the crash data and the safety impact the Preferred Alternative would have on the interstate and primary roadways in the area of influence as compared to the No-Build scenario.

The new connector road is expected to divert around 30 percent of 2035 No-Build future traffic away from the Route 3 Interchange. This will reduce traffic volumes along Route 3 and on I-95 between the Route 3 Interchange and the new I-95 Interchange. Because limited access facilities have lower crash rates than primary arterials, the vehicles being diverted to the new connector road are expected to experience lower crash rates on the new connector roadway as opposed to using Route 3. The Preferred Alternative will add capacity to I-95 from the new I-95 Interchange to the Route 17 Interchange in the form of additional C-D roads. The reduction in vehicles on Route 3 and on the I-95 mainline combined with the increase in capacity on I-95 is determined to contribute to safer operating conditions when compared to the 2035 No-Build Condition. Safer operating conditions include less stop-and-go conditions, lower vehicle density, and lower speed differential between free-flow travel and congested travel (Compare

Tables 3-6 and 6-10 and Figures 3-3 and 6-8). These factors are expected to improve traffic flow and reduce crashes/crash rates as compared to the No-Build scenario.

The Preferred Alternative will not only see a benefit from reduced traffic and added capacity, but also from the geometric improvements proposed. In the northbound direction, the diverted vehicles from the Route 3 Interchange would no longer use the low speed loop ramp at the weave area, but instead would merge onto I-95 using the new connector road flyover ramp designed to modern standards and a higher design speed. Also in the northbound direction, the existing Route 17 WB/NB loop off-ramp at the C-D road weave area would be replaced by a flyover ramp, eliminating the northbound I-95 C-D weave as well as the weave on WB/NB Route 17. In the southbound direction, the weave at the Route 17 Interchange is eliminated by removing the loop on-ramp from WB/NB Route 17 to southbound I-95, providing only one on-ramp in the southbound direction. The proposed braided ramps and C-D roads reduce conflict points and significantly reduce the large weaving volumes between the Route 17 Interchange and Route 3 Interchange. By replacing existing ramps with modern design standards, traffic flow is expected to increase and crash rates and overall crashes are expected to decrease with the Preferred Alternative as compared to the No-Build scenario.

A conceptual sign layout of the necessary guide signs was prepared for the preferred alternative, in order to demonstrate that the proposed interchange improvements could be signed in accordance with the standards in the Manual on Uniform Traffic Control Devices (MUTCD). The conceptual guide sign layout is shown in Figure 6-10 A & B. There are no apparent problems with signing the preferred alternative in accordance with the MUTCD.

4. The proposed access connects to a public road only and will provide for all traffic movements. Less than ``full interchanges" may be considered on a case-by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)).

The preferred alternative includes a new "full" interchange on I-95 that connects to a new public road, west of I-95. The new connector road will be limited access and connect two existing public roads (I-95 and Route 3). The new interchange on I-95 is a full interchange providing both on and off ramps to and from northbound and southbound I-95. The proposed connector road does not extend to the east of I-95 because there is no established need for such a route. Figure ES-2 illustrates the preferred alternative.

With exception to the items identified below, the proposed modifications are designed conceptually to meet or exceed current standards for Federal-aid projects on the Interstate System. The current VDOT Road Design Manual and AASHTO A Policy on Geometric Design of Highways and Streets (Green Book) guidelines served as the design standards for all design criteria. All new lanes and shoulders on the I-95 mainline, C-D roads, and ramps will be full width. All new ramps connecting to the I-95 mainline will have design speeds of 50 mph or higher with vertical and horizontal alignments that meet or exceed the design speed. All ramp terminal spacings exceed VDOT and AASHTO minimum standards. There are no limitations in providing adequate acceleration and deceleration lanes for the new I-95 ramps and C-D roads merges and diverges with I-95. Both acceleration and deceleration lanes can exceed 1000 feet

in length for all ramps. The parallel C-D roads have horizontal alignments that exceed 60 m.p.h. design speeds, but do require up and downgrades of up to 6% going to and from the Rappahannock River. However, the braided ramps associated with each C-D road have vertical grades meeting the requirements of 4% or less.

The recommendations for the Route 17 interchange (see Figure ES-2) will improve the geometry at the interchange by removing two tight loop ramps (the I-95 NB to Route 17 WB/NB off-ramp and the Route 17 WB/NB to I-95 SB on-ramp). The first is replaced with a directional ramp and the second with a left turn to the existing Route 17 EB/SB to I-95 SB on-ramp. However, two tight loop ramps with curve radii of approximately 250' (~30 m.p.h. design speed) will remain. Both of these ramps (the I-95 SB to Route 17 EB/SB off-ramp and the Route 17 EB/SB to I-95 NB on-ramp) will be on C-D roads that begin or end at these ramps. There are two other ramps that would not meet our targeted standards:

- I-95 SB to Route 17 WB/NB off-ramp which will diverge from the southbound C-D road: 300' radius = design speed of 30 m.p.h.
- I-95 NB to Route 17 WB/NB off-ramp which will diverge from the northbound C-D road 760' radius = design speed of 50 m.p.h. The ramp has a short 6% vertical rise to get over Route 17 and a 3% downgrade.

The connector road has a design speed of 60 m.p.h. and all lane widths, shoulder widths, horizontal and vertical curves will meet VDOT and AASHTO standards.

5. The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, and as specified in 23 CFR part 450, and the transportation conformity requirements of 40 CFR parts 51 and 93.

The proposed interchange is consistent with local and regional land use transportation plans. The Fredericksburg Area Metropolitan Planning Organization (FAMPO) and its member communities have developed a long-range comprehensive plan and strategy to address the growing demands on the region's transportation network. Central to this planning has been the need for improving mobility between I-95 and Route 3. The 2035 Constrained Long-Range Plan (CLRP) was adopted in January 2009 and includes a new I-95 access near the Virginia Welcome Center in the City of Fredericksburg, along with construction of a new limited access facility west to Route 3. (Funding for study, design, right of way and partial construction is included in the CLRP.) In addition, the 2008 update to Spotsylvania County's Comprehensive Plan indicates the need for a conceptual roadway called the "Rappahannock Parkway" to help alleviate congestion issues on Route 3 between the battlefield area in western Spotsylvania and the City of Fredericksburg, as well as congestion along I-95 from the Route 3 interchange into Stafford County[2]. VDOT's *Six-Year Improvement Program* includes this I-95 Access Study (UPC # 87768).

2 *Spotsylvania County Comprehensive Plan. Chapter 6: Transportation Element. P 5. 2008.*

Additionally, several resolutions have been passed in support of the project:

- Resolution 2007-48, March 27, 2007, Spotsylvania County Board of Supervisors - Endorsing access on I-95 at the current rest area just south of the Rappahannock River, to accommodate a new roadway, ultimately connecting Route 3 with I-95.

- Resolution FY 07-15, April 16, 2007, Fredericksburg City, Spotsylvania County & Stafford County - Endorsing conduct of an interchange justification report (IJR) for northbound and southbound access on I-95 just south of the Rappahannock River, to accommodate and new roadway ultimately connecting Route 3 with I-95.

- Resolution FY 07-37, September 17, 2007, Fredericksburg City, Spotsylvania County & Stafford County - Amending the FY 2007-2010 Transportation Improvement Program (TIP) to add the I-95 Access Study and other projects funded by RSTP and CMAQ apportionments to the FAMPO Region.

- Resolution FY 10-24, July 19, 2010, Fredericksburg City, Spotsylvania County & Stafford County – endorsing the I-95 Access Study preferred alternative and direct staff to prepare an IJR for review and concurrence by VDOT and FHWA.

See Section 1.4 for additional details

6. In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan (23 U.S.C. 109(d), 23 CFR 625.2(a), 655.603(d), and 771.111).

This I-95 Access Study is being coordinated closely with other relevant I-95 studies such as the Jackson Gateway I-95 Access Study and the I-95/Route 630 Interchange Modification Report (IMR). These studies incorporate a 25-mile section of I-95 from milepost 118 to milepost 143. Seven interchanges exist along this section of I-95 at mileposts 118, 126, 130, 133, 136, 140 and 143. The Jackson Gateway I-95 Access Study is addressing deficiencies and changes in access between milepost 118 and 126. This I-95 Access Study (near the rest area) is addressing deficiencies and changes in access between mileposts 130 and 133. The I-95/Route 630 IMR is addressing deficiencies and changes in access between milepost 136 and 143. Traffic data and forecasts have been coordinated and are consistent between the three studies. Between these studies, any and all requests for new or revised access are being addressed in detail for this 25 mile section of I-95. No additional changes in access are planned or have been identified at this time.

A fourth initiative, I-95 HOT Lanes involves construction of two new HOT Lanes from Massaponax (milepost 126) in Spotsylvania County to a point in north of the study area. Again, coordination took place with VDOT to ensure that consistent traffic data was used for the environmental documents that were under preparation for the I-95 HOT lane project and this I-95 Access Study. The I-95 HOT lane project was originally scheduled for financial close during the fall of 2009. Due to external factors, the project is currently delayed and ultimate delivery is unknown at this time. Development of the HOT lanes will involve access between the I-95

general purpose lanes and HOT lanes. If the I-95 HOT lane project resumes, then VDOT and the concessionaire will need to request additional access changes to I-95 at that time.

7. When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements (23 CFR 625.2(a) and 655.603(d)). The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point (23 CFR 625.2(a) and 655.603(d)).

VDOT and the City of Fredericksburg, Spotsylvania County and Stafford County have a formal traffic analysis process via VDOT's "Traffic Impact Analysis Regulation", 24-VAC 30-155, to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point.

However, this need for the new access point is not the result of any one development but the need to address existing and forecasted congestion on existing interchanges and the I-95 Rappahannock River crossing due to regional land use development and increase in interstate travel on the East Coast of the United States. The new interstate access point connects to a new 4-mile limited access roadway. Dispersion of traffic to and from this new connector road will be via interchanges at both termini with an additional single interchange providing access to existing and future retail and commercial areas.

8. The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing (23 CFR 771.111).

The proposed project involves adding a new interchange to a federal interstate facility, it will be necessary to comply with the requirements of NEPA and prepare the appropriate level of environmental analysis, documentation, and coordination. While FHWA may conditionally approve an IJR for this project, the draft NEPA document must be completed and approved by FHWA before FHWA will formally approve the IJR.

As part of this I-95 Access Study, environment constraints were mapped to assist in the development of alternatives. Alternatives were developed to avoid or minimize impacts to the identified environmental constraints. Environmental constraints identified are discussed in Section 2.10 and shown in Figure 2-12. Next, a preliminary review of potential impacts to known environmental resources was conducted. It was not in any way intended to satisfy any NEPA requirements but serve as an overview of potential impacts that will need to be addressed during the NEPA process. The environmental impacts of the Preferred Alternative are discussed in Section 7.1 and listed below. Figures 7-1 A and B show the estimated right-of-way footprint for the preferred alternative over the previously identified environmental constraints. No "fatal flaw" impacts were identified that would prevent the project from being constructed.

Potential impacts of the Preferred Alternative include:

- Wetland and stream impacts (Golin Run)
- Chancellorsville Battlefield Historic District, Salem Church Historic District, Five Mile Fork Neighborhood (all are listed or eligible for listing on the NRHP; therefore, all are Section 106 and Section 4(f) Resources)
- Noise at adjacent residential properties
- City of Fredericksburg's Riparian Lands
- Three to four residences along Single Oak Lane, one to two residences along Peaks Lane, three to four residences at the end of Musselman Road, and an additional two to three residences near the Spotsylvania County/City of Fredericksburg boundary may be displaced.
- Fall Quary Run and its associated wetlands
- The C-D Roads cross the Rappahannock River and its associated wetlands and riparian lands.
- Impacts to the proposed U.S. National Slavery Museum parking lot. The Museum's Spirit of Freedom Garden adjacent to Hospitality Lane would require relocation.
- Chesapeake Bay Preservation Act Resource Protection Areas and Resource Management Areas

The next step in the environmental compliance process requires conducting detailed environmental analyses to assess impacts, developing avoidance and minimization alternatives, coordination with resource agencies, and the development of compensatory mitigation and NEPA documentation. A determination of which level of NEPA documentation is required would be made by FHWA based on VDOT's recommendation. VDOT's recommendation is made, in part, based on coordination with state and federal resource agencies contacted in the scoping process and a query of existing environmental databases. NEPA documentation would likely take the form of an Environmental Assessment (EA) but it is possible that an Environmental Impact Statement (EIS) would be necessary should it be evident that project-related impacts will be significant.

While the impacts listed above are not expected to be substantial enough to preclude the proposed project, each resource would need to be evaluated in light of the laws and regulations protecting the resource in question during the NEPA process. The preferred alternative will be evaluated as one of the build alternatives. In addition comprehensive public involvement and agency coordination will occur. The implications of and "next steps" needed to address NEPA requirements are presented in Section 7.2. The development of final plans, right-of-way acquisition and physical construction will be performed only after FHWA's acceptance of the environmental document.